

Jumping Finite Automata

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Based on

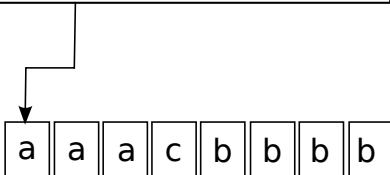
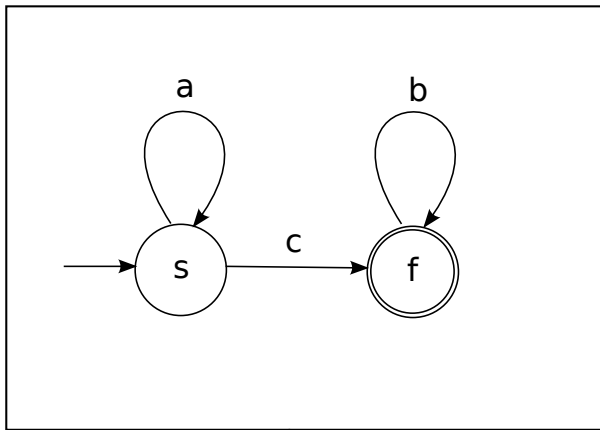
 Alexander Meduna and Petr Zemek

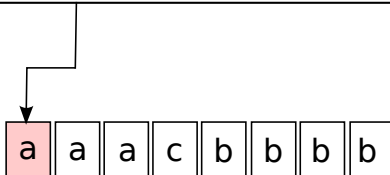
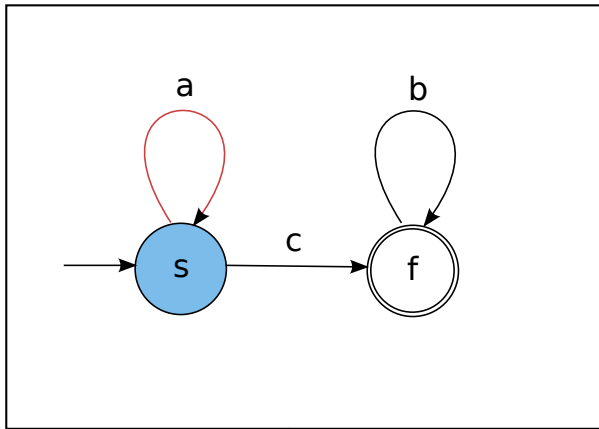
Jumping Finite Automata

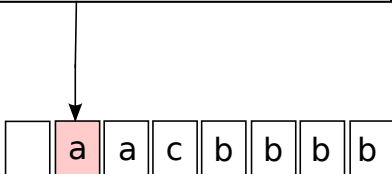
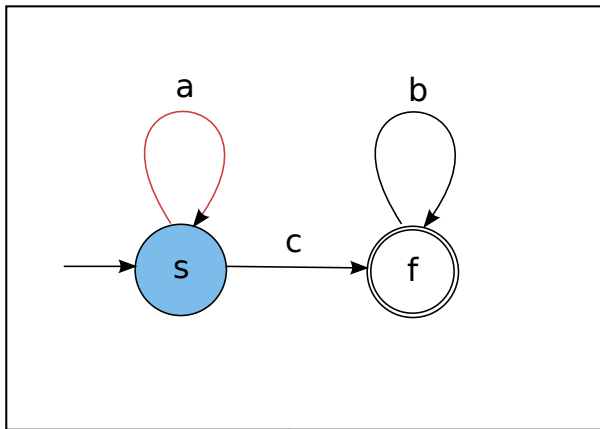
International Journal of Foundations of Computer Science

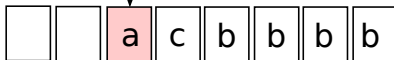
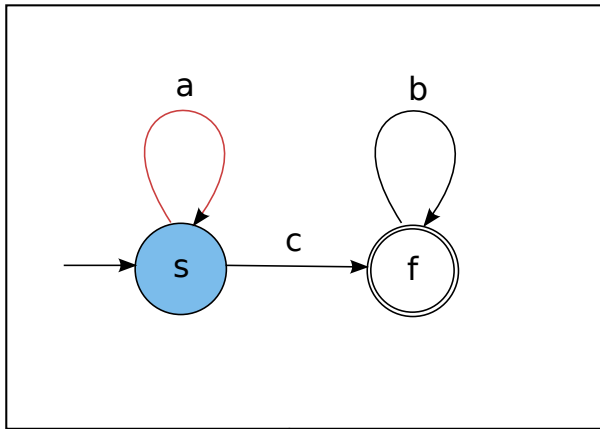
Vol. 49, No. 2, p. 1555–1578, 2012

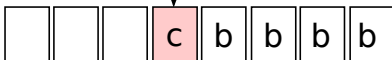
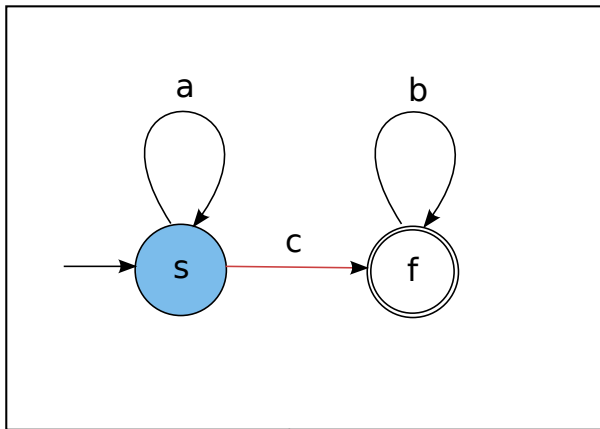
2nd Annual Conference of IT4I National Supercomputing Center

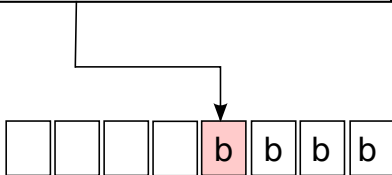
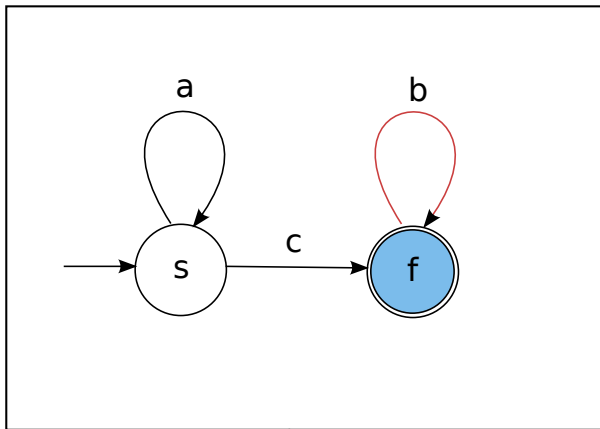


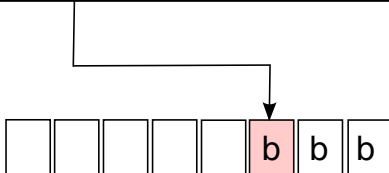
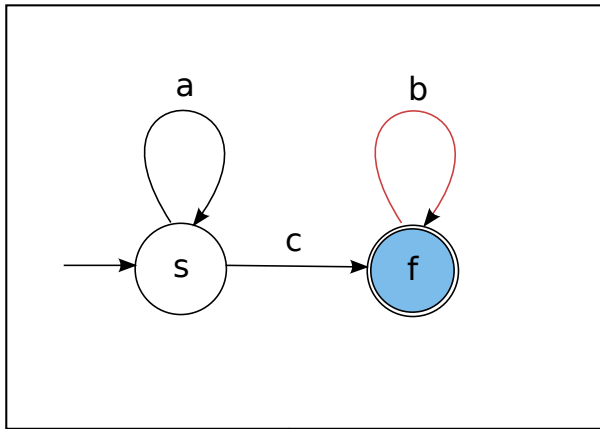


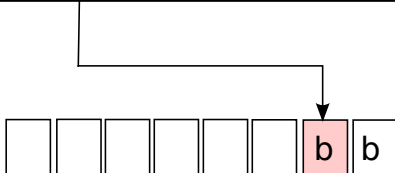
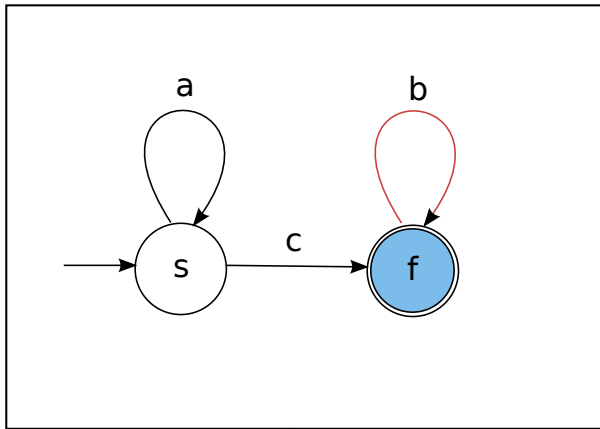


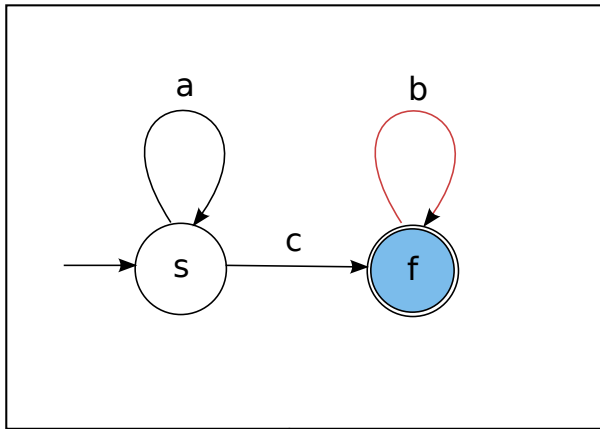


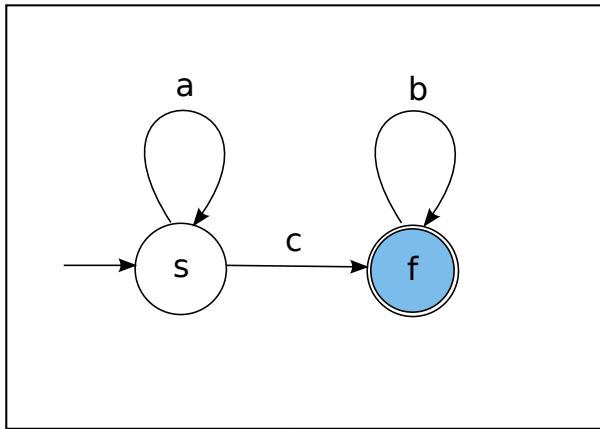






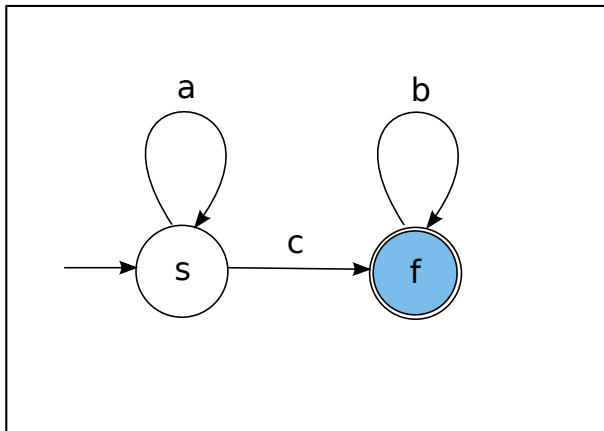




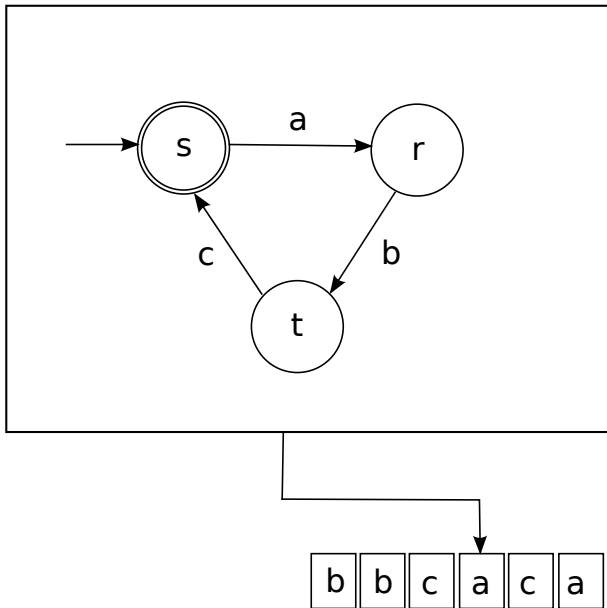


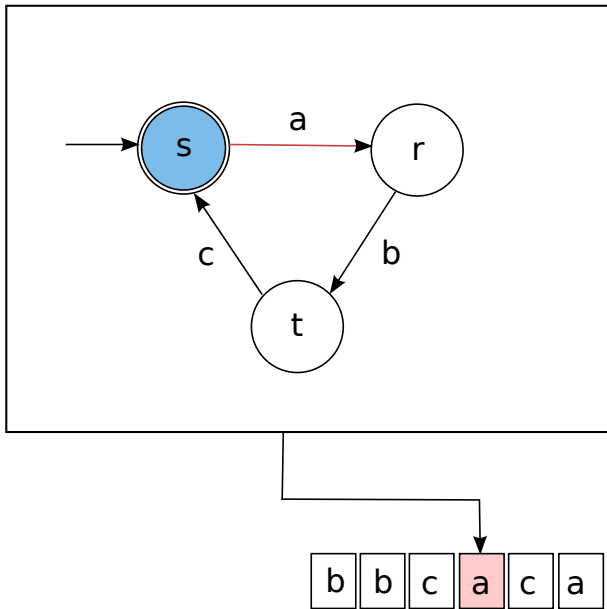
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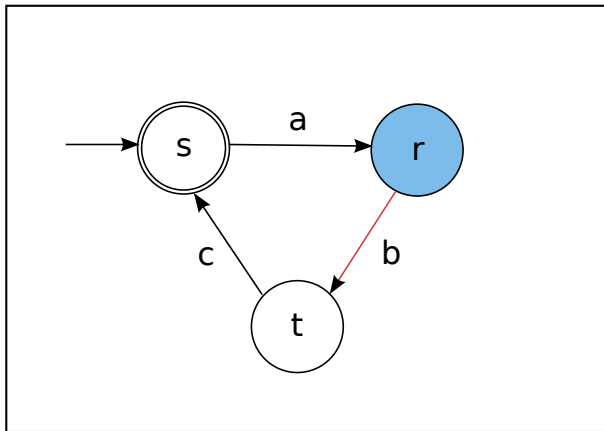


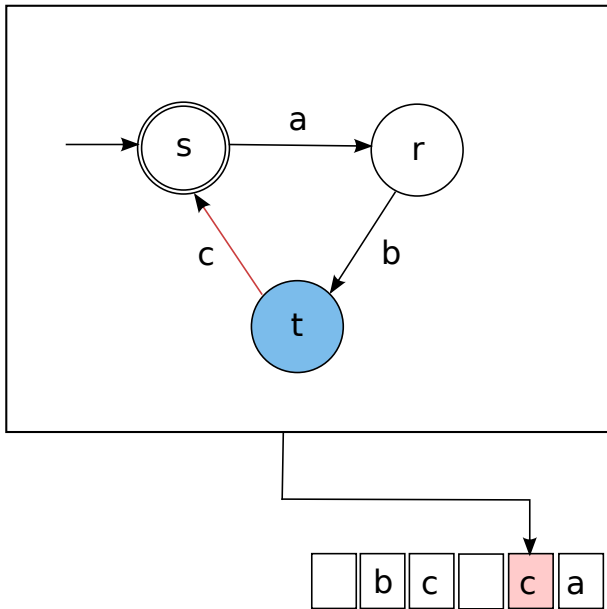


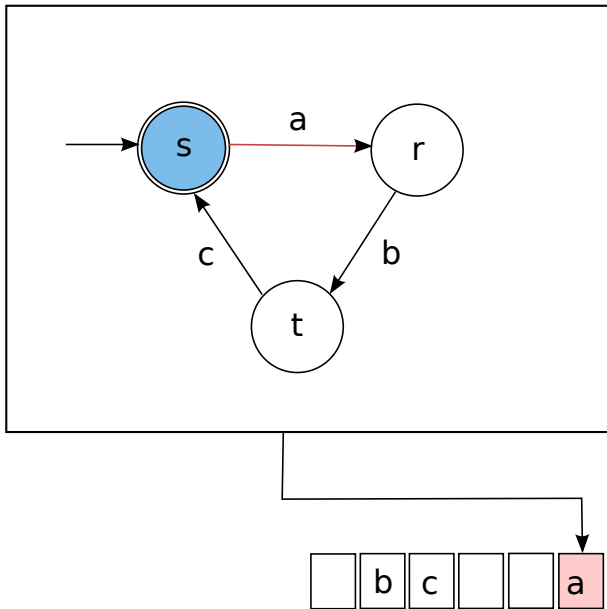
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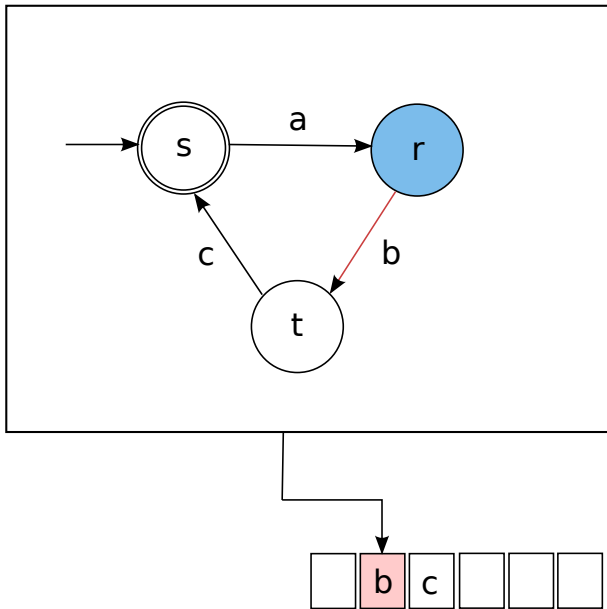


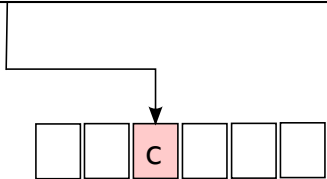
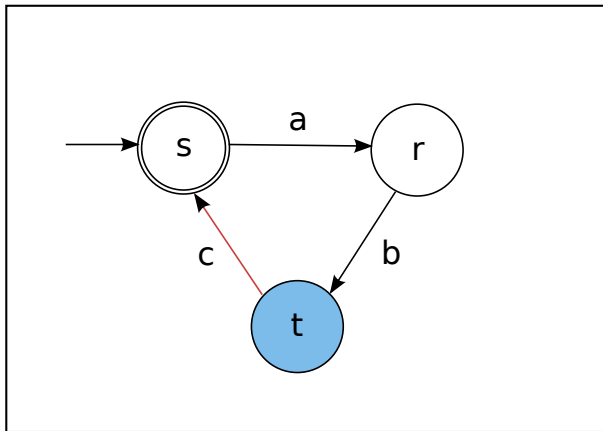


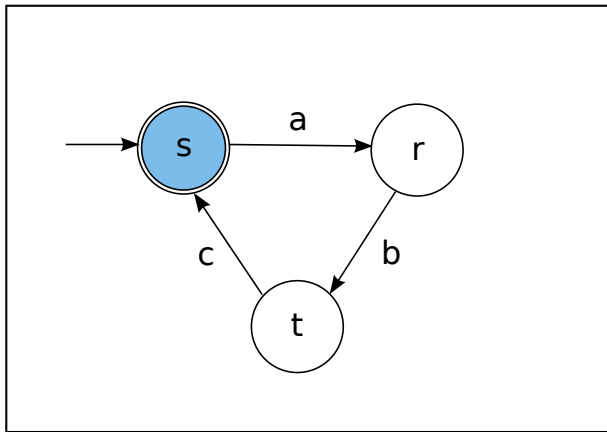






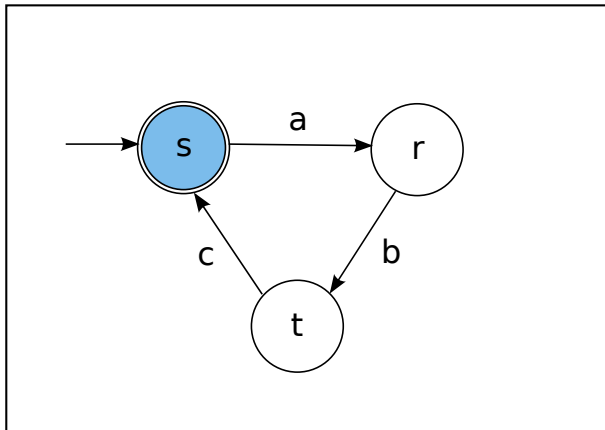






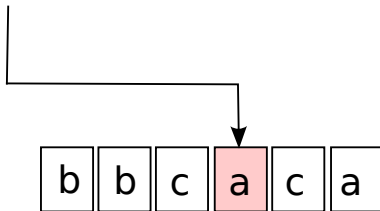
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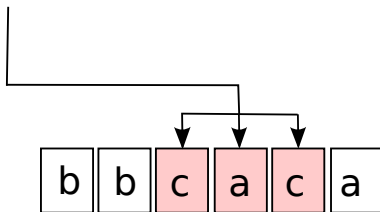


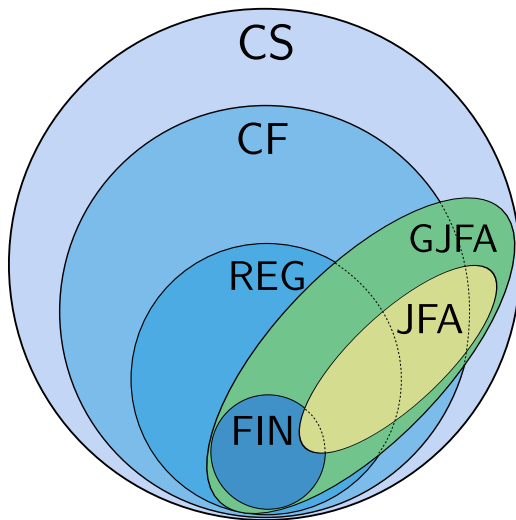
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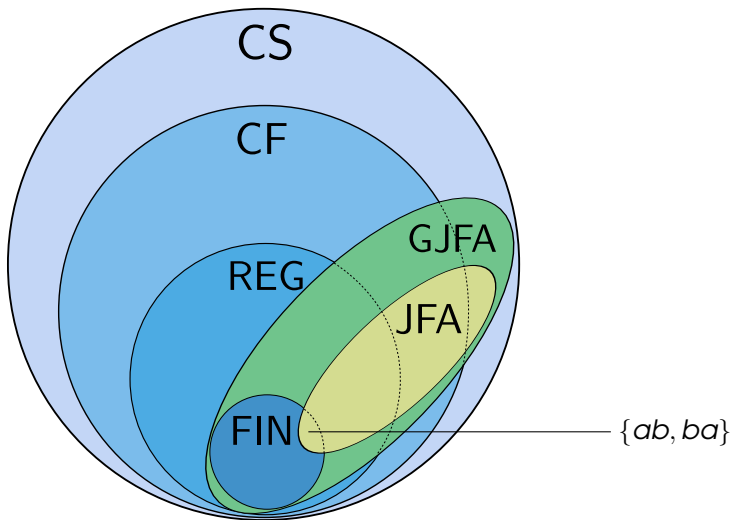
Jumping Finite Automata (JFA)

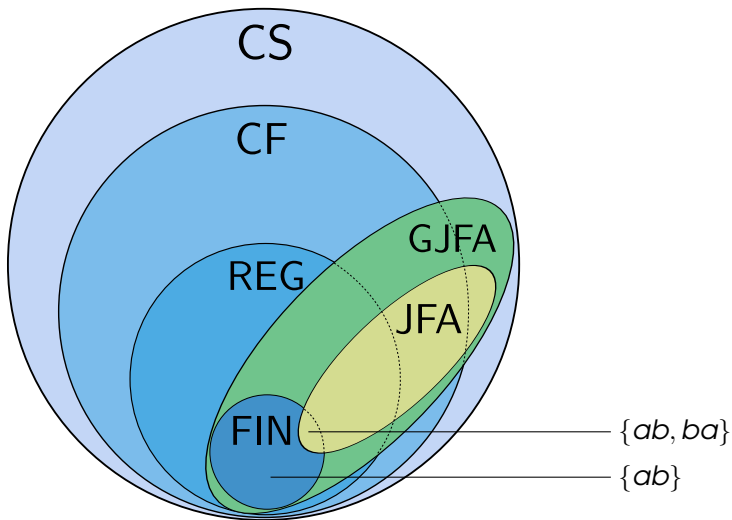


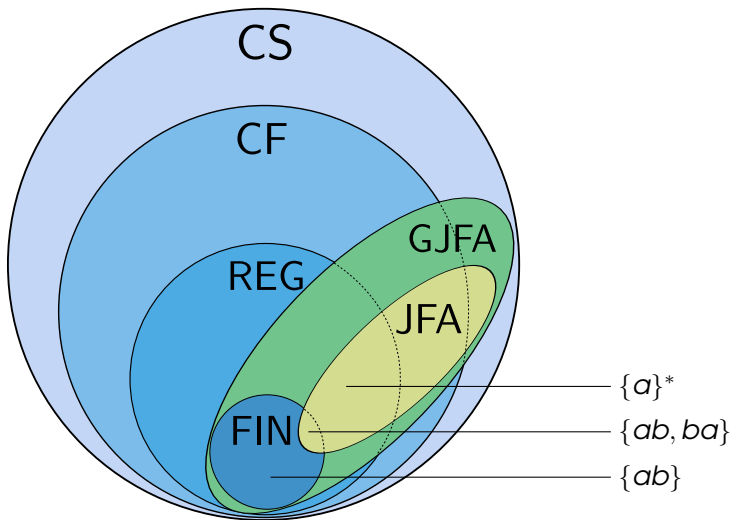
General Jumping Finite Automata (GJFA)

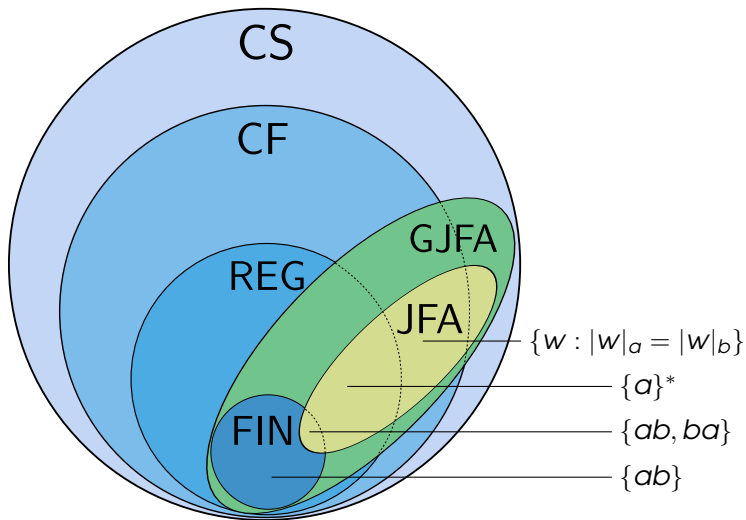


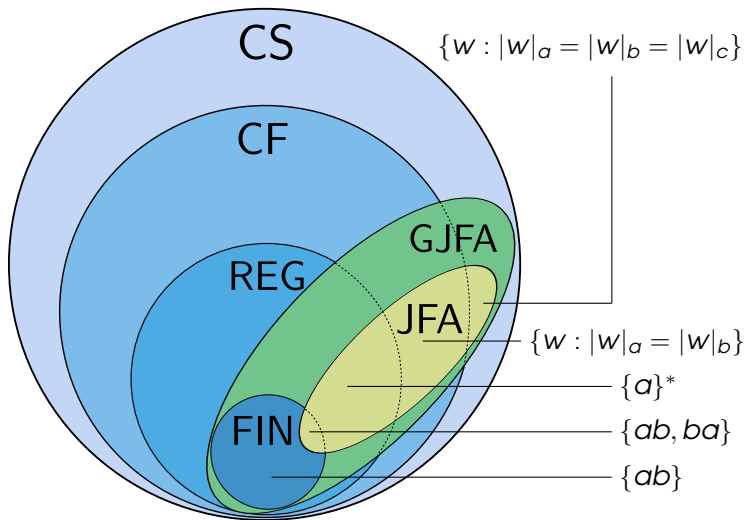


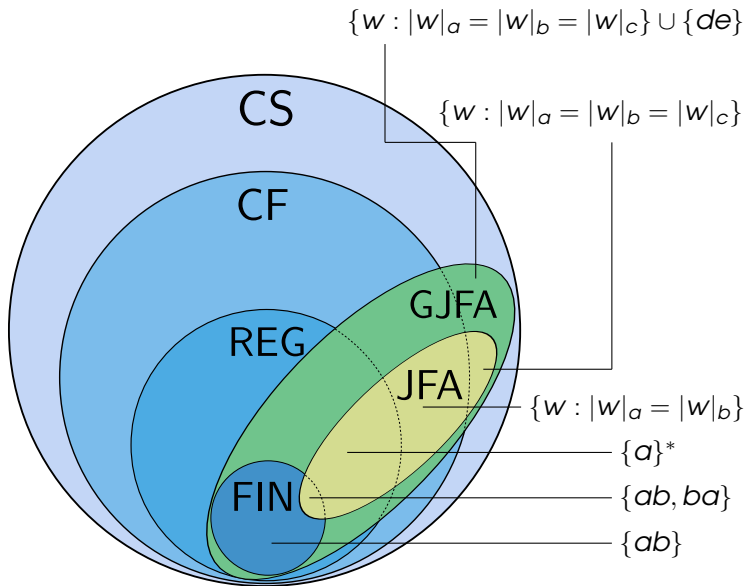


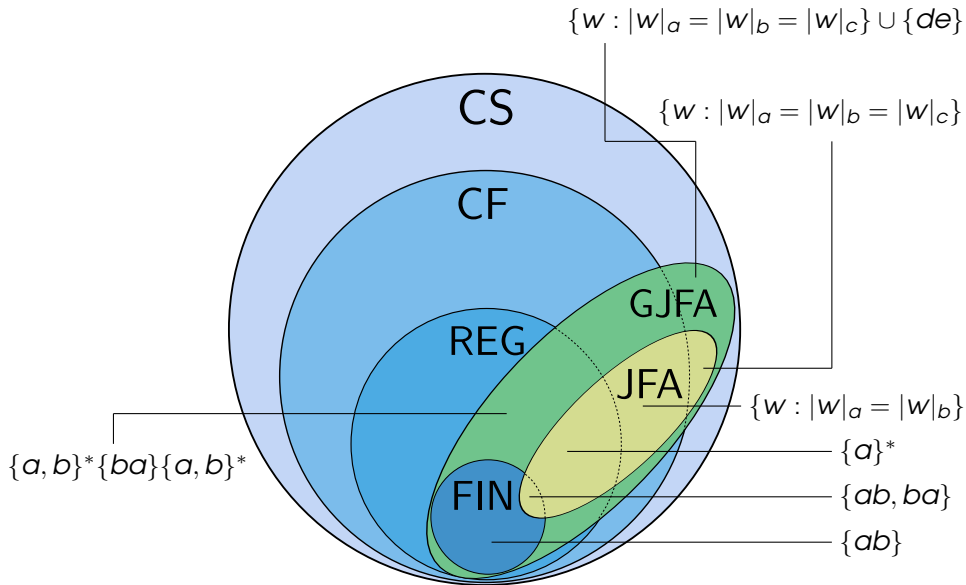


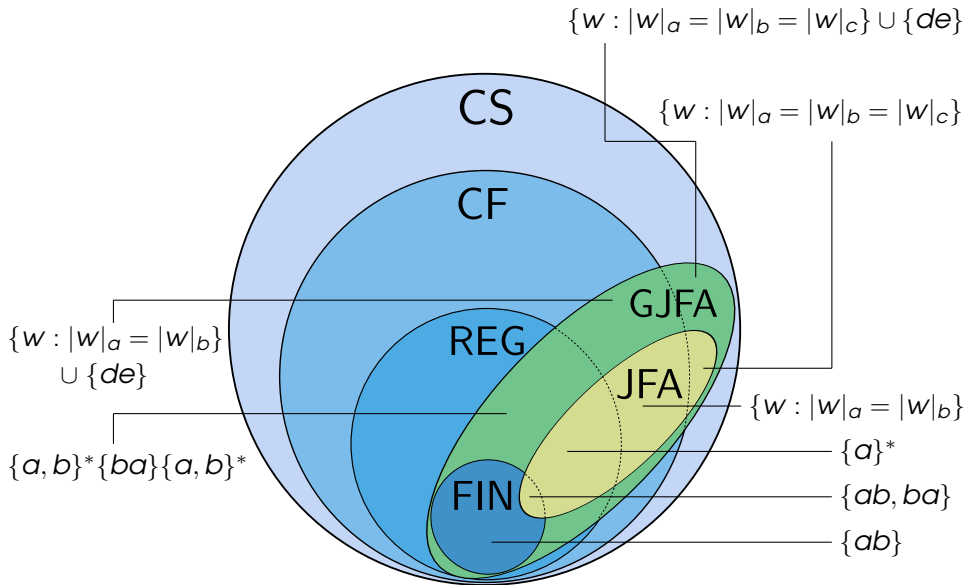


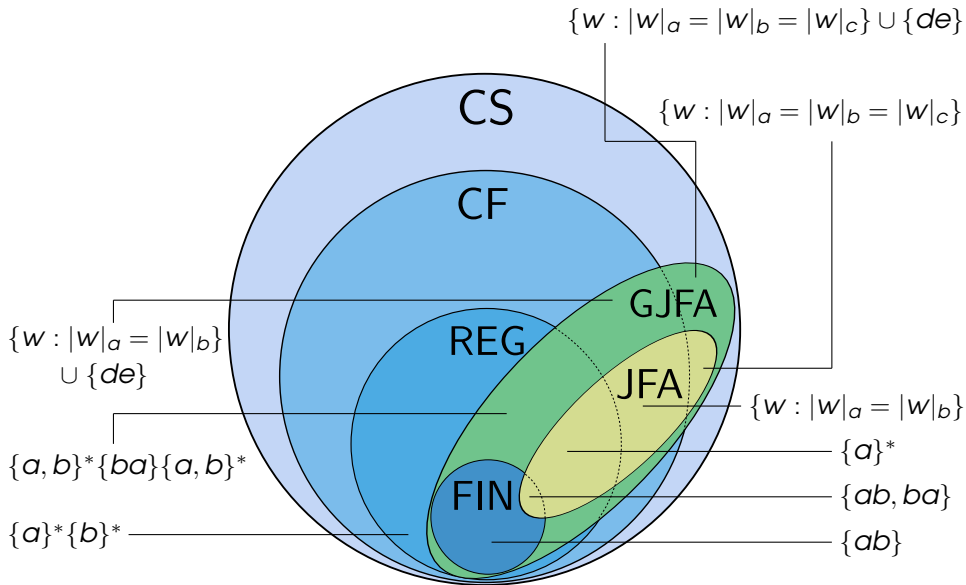


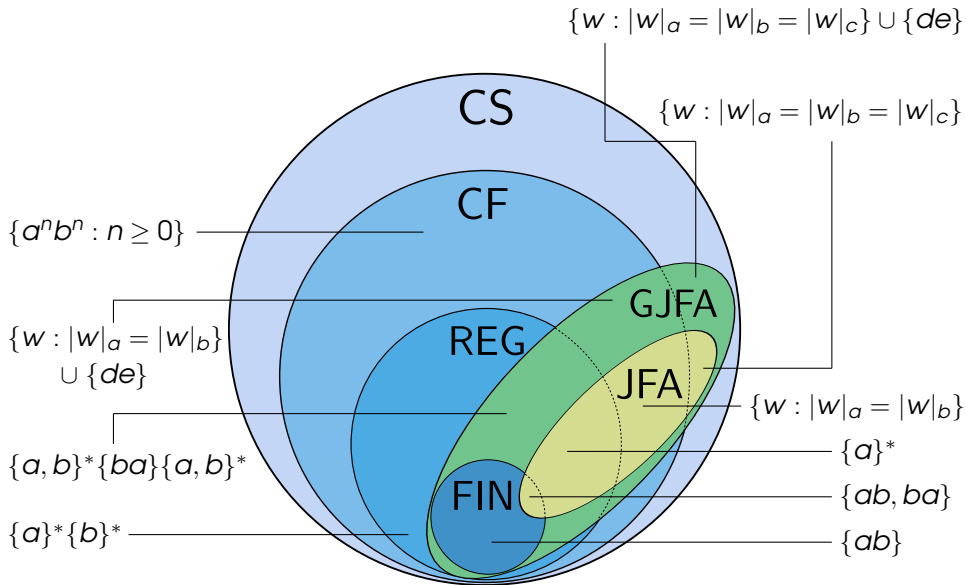


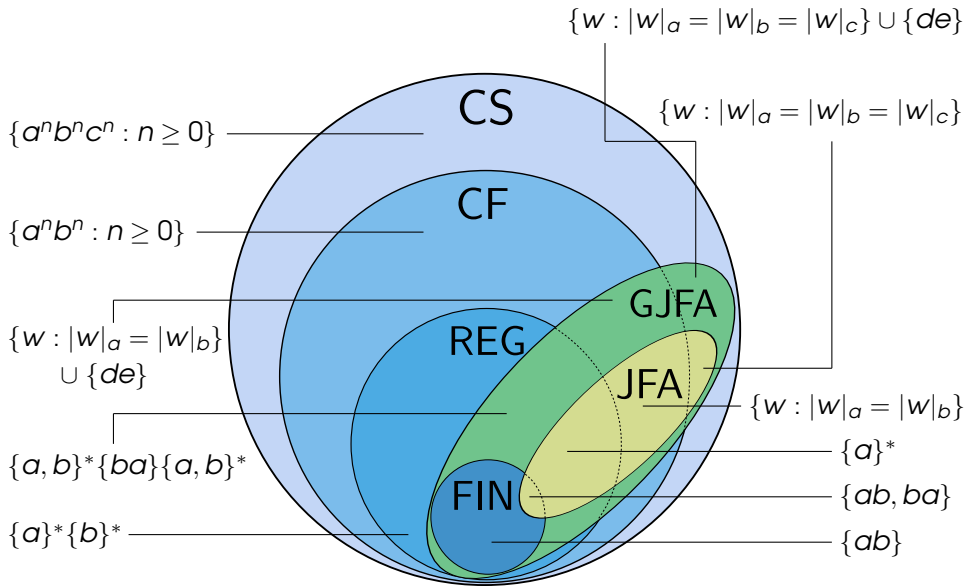












	GJFA	JFA	REG
union	+	+	+
intersection	-	+	+
concatenation	-	-	+
intersection with reg. lang.	-	-	+
complement	-	+	+
shuffle	?	+	+
mirror image	?	+	+
Kleene star	?	-	+
Kleene plus	?	-	+
substitution	-	-	+
regular substitution	-	-	+
finite substitution	+	-	+
homomorphism	+	-	+
ε -free homomorphism	+	-	+
inverse homomorphism	+	+	+



- decision problems



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- *left* and *right* jumps



- decision problems
- *left* and *right* jumps
- an infinite hierarchy of language families



- decision problems
- *left* and *right* jumps
- an infinite hierarchy of language families
- a variety of start configurations



- decision problems
- *left* and *right* jumps
- an infinite hierarchy of language families
- a variety of start configurations
- making jumping finite automata deterministic



- decision problems
- *left* and *right* jumps
- an infinite hierarchy of language families
- a variety of start configurations
- making jumping finite automata deterministic
- application perspectives